

ABSTRACT OF THE DISCLOSURE

Methods and apparatus for protecting copyrighted information, e.g., video signals, from unauthorized use are described. Encrypted video signals are transmitted from a source device, e.g., display adapter, to a display device, e.g., monitor, over analog signal lines after the identity of the destination device is confirmed by receipt of a certificate assigned to the destination device. A session key, used for encrypting the analog signals, is generated and exchanged between the source and destination devices. The source and destination devices each include a pseudo-random number generator driven by the session key. As part of the encryption process a false video signal is generated. The false video signal and R, G, B video signals are transmitted to the display device over four lines. The lines used to transmit the R, G, B and false video signals are periodically swapped as a function of the output of the pseudo random number generator to encrypt, e.g., scramble, the video signals. To avoid having to provide an additional line between the display adapter and the display device beyond those used in conventional displays, horizontal synchronization information is combined with, e.g., modulated on, one or more of the other signals transmitted to the display. The horizontal sync line is then used to convey one of the four video signals. The display device extracts the horizontal timing information from the received video signals and decrypts the signals using the output of its pseudo random number generator to reverse the scrambling process used to encrypt the transmitted video signals.

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